THE POWER OF PERSPECTIVE

The Economic Impact of Wal-Mart

Executive Summary

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I. EXECUTIVE SUMMARY

Abstract

Global Insight analyzed a set of data provided by Wal-Mart concerning its sales, purchases, employment, and payroll to answer two questions. The first was "How would the economies of the U.S. and Dallas-Ft. Worth have been different in 2004 if Wal-Mart had not existed?" The second was "How has the level and composition of retail employment at the county level typically been affected by the entry and expansion of Wal-Mart stores and Supercenters?"

Previous studies have shown that Wal-Mart has contributed to lower consumer prices. Global Insight conducted a statistical analysis that supports these findings. We found that the expansion of Wal-Mart over the 1985-2004 period can be associated with a cumulative decline of 9.1% in food-at-home prices, a 4.2% decline in commodities (goods) prices, and a 3.1% decline in overall consumer prices as measured by the Consumer Price Index - All Items, which includes both goods and services. These estimates are in line with other researchers' estimates of Wal-Mart's price effects. This impact amounts to consumer savings of $263 billion by 2004, which is the equivalent of $895 per person or $ 2,329 per household. These results are based on empirically derived estimates from the CPI as it is measured by the Bureau of Labor Statistics and do not include any additional cost savings that might come from capturing the effects of measurement bias in the CPI itself.

These savings have been generated through Wal-Mart's higher levels of capital investment in distribution and inventory control assets, lower import prices, and greater efficiency in its whole supply chain.

We did not conduct a thorough, comparative analysis of Wal-Mart's wages, benefits, and working conditions relative to a fair and comparable benchmark. The limited analysis we did undertake, based on an analysis of a large sample of employee wage data, did not find evidence to conclude that Wal-Mart pays its workers below-market wages.

A full accounting of Wal-Mart's impact using Global Insight's modeling framework finds that Wal-Mart has generated a positive net economic impact on the U.S. economy. By 2004, it is responsible for 210,000 net jobs, a level of total factor productivity (general economic efficiency of the economy) that is 0.75% higher by 2004 than it would have been. Nominal wages are 2.2% lower, but given that consumer prices are 3.1% lower, real disposable income is 0.9% higher than it would have been in a world without Wal-Mart.

To acknowledge those who argue that Wal-Mart has led to real wage compression in the U.S. economy, we conducted analysis to determine how sensitive our results were to our assumption that there has been no real wage compression. We showed that assuming wage compression rather than total factor productivity growth is behind the

price decline. Furthermore, the impact on total real disposable income is still significant and positive.

Similar results are provided for the Dallas-Ft. Worth-Arlington MSA. Due to increased market penetration the consumer cost savings are estimated to have been a cumulative 4.0% by 2004. This impact in conjunction with other direct, indirect, and induced impacts has led to 6,300 more jobs and a 2.6% increase in real disposable income in the Dallas-Ft. Worth area.

In an analysis of county-level impact results, Global Insight has largely confirmed previous research on how the entry and expansion of Wal-Mart affects the structure of county-level retail employment. With the opening of a typical 150-350 person store in a county, retail employment tends to increase by 137 jobs over the short term and levels off to a 97 job increase over the longer term. It also leads to net job declines in food stores and apparel & accessory stores, but to net job increases in building materials & garden supplies stores and general merchandise stores. This indicates that Wal-Mart seems to displace other retail establishments, but also serves to stimulate the overall development of the retail sector that leads to an overall positive impact (in terms of retail employment) for the counties in which Wal-Mart has expanded.

Study Background

An active debate has built up around the issue of Wal-Mart's impact on the United States. This debate has been taking place on a range of issues at the national, state, county, metro area, and neighborhood levels. With an objective of making a positive contribution to this debate, Wal-Mart commissioned Global Insight to undertake an independent assessment of Wal-Mart's economic impact on the U.S. economy.

This analysis has taken advantage of Global Insight's core strengths:

- Global Insight's 42-years of experience[1] in providing rigorous, fact-based forecasts and analyses of the U.S. economy at the national, state, metro area, and county levels.
- Global Insight's reputation for providing independent, objective analyses on the economic impact of a wide variety of policies and economic forces, across a broad range of industries in the United States as well as many other countries.
- Global Insight's set of national, state, and metro area-level models provide an independent framework for taking into account the many interrelationships in today's complex economy in order to depict a comprehensive assessment of net economic benefits.

[1] Through its precursor companies Data Resources, Inc. (DRI) and Wharton Econometric Forecasting Associates (WEFA). WEFA was founded in 1963 and DRI was founded in 1968 both on the basis of deploying large scale databases with econometric forecasting models to understand and forecast economic performance. These two companies where joined to form Global Insight in May 2001.

Global Insight began the project by requesting and receiving a large set of detailed data from Wal-Mart concerning its sales and employment at Wal-Mart stores and Wal-Mart Supercenters going back to the mid-1980s.[2] Global Insight also received detailed data on Wal-Mart's purchases from its suppliers in 2004, as well as a sample of employee wage data by store and job category that was taken in October 2004. In addition, we interviewed a variety of Wal-Mart staff to gain a deeper understanding of Wal-Mart's view on how they actually decide where to open new stores, how they set prices, how they hire workers, and how they decide how much pay to offer them. This information was then further supplemented by a thorough review of all existing studies and analyses concerning Wal-Mart's economic impact.

Our study is structured to determine the net economic impact of Wal-Mart at the national, metropolitan, and county levels. The structure of the analysis is as follows:

- A national impact analysis to estimate the overall impact of Wal-Mart as measured by commonly used measures of national economic performance.
- A metropolitan-level impact analysis to characterize how the impact could be measured in a specific metropolitan statistical area (MSA), Dallas-Fort Worth, and to serve as an example for how Wal-Mart's economic impact should be estimated in other cities.
- A county-level impact analysis to look at the specific dynamics associated with the impact of Wal-Mart's entry and expansion at the local (county) level.

National Impact Results

Global Insight has found evidence that Wal-Mart has directly raised the economy's potential to produce by investing in more capital, by using all its factors of production more efficiently, and by helping suppliers operate more efficiently. The higher supply potential raises productivity, lowers consumer prices, and increases real consumer purchasing power.

Previous studies have shown that Wal-Mart has contributed to lower consumer prices. Global Insight conducted a statistical analysis that supports these findings. We found that the expansion of Wal-Mart over the 1985-2004 period can be associated with a cumulative decline of 9.1% in food-at-home prices, a 4.2% decline in commodities (goods) prices, and a 3.1% decline in overall consumer prices as measured by the Consumer Price Index - All Items, which includes both goods and services. These estimates are in line with other researchers' estimates of Wal-Mart's price effects (see Tables 19 and 20 in Appendix A).

The 3.1% estimate is a cumulative total over the 1985-2004 period and corresponds to a 0.1-0.2% reduction in the annual inflation rate over this period. These results were generated through a statistical analysis of the variation in consumer prices across a set

[2] Sam's Club sales and employment as well as employment at distribution centers, transportation and miscellaneous operations were not covered in this analysis.

of metropolitan statistical areas (MSAs) over time in relation to changes in Wal-Mart's market penetration and other (non-Wal-Mart) drivers of price variation. Jerry Hausman of M.I.T. has presented an analysis that the official CPI actually incorporates a bias that excludes some of Wal-Mart's direct cost savings.[3] Global Insight's analysis only focused on the CPI "as measured" and did not add any additional cost savings that might be generated by this hypothesized measurement bias.

The reduction in the price level due to the presence of Wal-Mart translates directly into savings for consumers amounting to $263 billion by 2004, which amounts to $895 per person and $2,329 per household.

Once Global Insight established this benefit to the economy we needed to understand how these cost savings were generated. These savings could have come from either lower wages, increased capital investment, lower import prices, or greater total factor productivity.

- **Wal-Mart does not appear to be paying below-market wages.** In impact studies of this nature, it is important to acknowledge that even if there are broad positive net benefits identified, there can be specific segments of the population that lose out. Many external observers have held that the cost of Wal-Mart's success in offering lower prices has come at the expense of its workers. Coming to a comprehensive position on this issue is beyond the scope of this study. It would require a thorough, comparative analysis of Wal-Mart's wages, working conditions, and benefits relative to a fair and comparable benchmark. However, for the purposes of this study, we did analyze a large sample of employee wage data provided to us, broken down by job position and store. We selected a sample set of job positions from this data that we were able to validly compare to standard Bureau of Labor Statistics (BLS) employment occupational categories. We analyzed the data to make them as comparable as possible, and the methodology we used is fully documented in the body of the report. The results indicate that there is no evidence that Wal-Mart significantly pays lower than the retail industry averages for the job positions that we analyzed. In fact, the analysis shows the weighted average Wal-Mart wage rate for the group of job positions we sampled is actually modestly higher than the comparable weighted average BLS wage rate. For a number of reasons expressed in the body of the report, we do not consider this a definitive finding, but it has led us to make an assumption in our impact analysis that Wal-Mart pays the market wage that fairly reflects the skills, experience, and education it requires in its workers.
- **Wal-Mart is more capital intensive.** We found evidence that Wal-Mart is more capital intensive than its competitors. Therefore, we apportioned some of the cost savings as having come from Wal-Mart's investment in capital related to increasing their distribution and inventory control efficiencies.

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[3] Hausman, Jerry & Leibtag, Ephraim. "CPI Bias from Supercenters: Does the BLS know that Wal-mart exists?" NBER Working Paper Series Aug 2004:2.

- **Wal-Mart has contributed modestly to lower import prices.** While we did not have sufficient data to make a definitive conclusion in this regard, we have assumed that some of the cost savings have come about through lower import prices. For this analysis, we assumed that Wal-Mart is able to purchase imported goods for 5% less than traditional retailers due to its high volume and distribution efficiencies.
- **Wal-Mart's innovations in distribution and inventory control efficiencies have generated an increase in the economy's total factor productivity.** Accounting for the above three forces does not allow us to fully explain the cost savings we have observed. Therefore, the only way that these cost savings could have been generated is through a Wal-Mart induced increase in the economy's total factor productivity (TFP) of about 0.75%. In simple terms, TFP is a measure of technical progress, or could also be considered a measure of the general efficiency of the economy. It addresses improvements in output not explained by additional inputs of capital or labor. Typically, this arises from deploying technology or process improvements to more efficiently make use of the specific mix of capital and labor deployed.

Through its productivity gains, Wal-Mart has also impacted the national labor market. Demand for labor is keyed to the level of output in the economy, the real wage, and the productivity of factors of productions. Higher output levels in the economy with Wal-Mart drive up demand for labor while higher productivity levels mute the employment gains. By incorporating the above findings into the Global Insight Model of the U.S. Economy we estimate that the existence of Wal-Mart has led to there being some 210,000 more jobs by 2004 that would otherwise not have existed. This corresponds to a 0.15% increase in jobs, significantly less than the 0.9% gain in the economy's output. The unemployment rate is estimated to have been 0.14 percentage point lower by 2004 due to Wal-Mart.

These 210,000 additional jobs are a plus, but what is Wal-Mart's effect on the rest of the labor force? Are they better off? As noted above, lower inflation levels in the economy with Wal-Mart put downward pressure on nominal wages, while higher labor demand and productivity levels put upward pressure on wages. Rather than declining in line with the 3.1% decrease in consumer prices, wage rates are only 2.2% lower overall. This implies that **real wages were 0.9% higher by 2004** than they would have been in an economy without Wal-Mart. The nominally lower income levels were more than offset by lower price levels, leading to a rise in real disposable income. Consumers earned less in nominal dollars, but their income bought them more in the economy with Wal-Mart.

Wage Sensitivity Analysis

To acknowledge those who argue that Wal-Mart has led to real wage compression in the U.S. economy, Global Insight conducted an analysis to determine how sensitive our results were to our assumption that there has been no real wage compression. In this analysis we assumed that the lower prices we attributed to Wal-Mart are due to lower wages rather than to higher productivity. Hence we decreased the national average wage rate by an additional 1% (implying a 25% decline in nominal general merchandise and grocery store wage rates), which completely removes the increase we introduced to total factor productivity. With lower productivity levels, employment rises by 870,000 jobs. The higher employment levels raise real disposable income 1.7% in spite of lower nominal wages.

MSA Impact

The purpose of the analysis at the MSA level is to determine "How different would the economy of Dallas-Fort Worth-Arlington MSA have been in 2004 if Wal-Mart had not existed?" To answer this question, Global Insight focused primarily on estimating the differences in the levels of economic activity in the Dallas-Fort Worth-Arlington MSA between the Baseline Scenario, which includes Wal-Mart, and the alternative No Wal-Mart Scenario. The divergence that exists in 2004 is due to the cumulative effects of Wal-Mart's increasing presence in the MSA since the first Dallas-Fort Worth-Arlington-area Wal-Mart store was established in 1978.

The main impact of Wal-Mart's presence in the Dallas-Fort Worth-Arlington MSA is a price level by 2004 that is 4% lower because of Wal-Mart. This driver influences the rest of the local economy. Through direct, indirect and induced effects, Wal-Mart's presence has resulted in real disposable income gains of 2.6% by 2004 and has added 6,300 jobs to the Dallas-Fort Worth area that otherwise would not have been there.

County Impact

While Wal-Mart is a national retail chain, a majority of the current debate concerning Wal-Mart's impact occurs at the local level. Citizens, lawmakers, and businesses in counties and municipalities are concerned about the hypothesized harmful effects that a potential Wal-Mart entrant could have on the local economy. The county-level analysis strives to determine the impact of the opening and further expansion of a typical Wal-Mart store in a given county. An econometric analysis was performed using economic and Wal-Mart square-footage data for 3,101 counties for the period 1985 to 1997. The goal of the analysis was to isolate the effect of the Wal-Mart square-footage variable and translate it into an impact on retail employment at the county level.

The model looked at Wal-Mart's impact in the context of a 100,000-square-foot Wal-Mart being placed in an average county of the dataset in the year in 1985. Over the period 1985 to 1997, the impact is as follows: in the first three years, with the opening of a typical 150-350 person store in a county, there is a gain of 137 retail employment jobs in the county; in the subsequent years, as competitors adjust, there is a loss of 40 retail jobs. The net impact of the entry of the Wal-Mart store is 97 jobs. It also leads to net job declines in food stores and apparel & accessory stores, but net job increases in building materials & garden supplies stores and general merchandise stores (which is where Wal-Mart is classified). This indicates that Wal-Mart does displace other retail establishments, but also serves to stimulate the overall development of the retail sector in a county. Wal-Mart has an overall positive impact (in terms of retail employment) for the counties in which it has expanded. As this analysis summarizes the impact for an "average" county, the actual results would vary from county to county, depending on factors such as industry mix within the county and number of competitors.